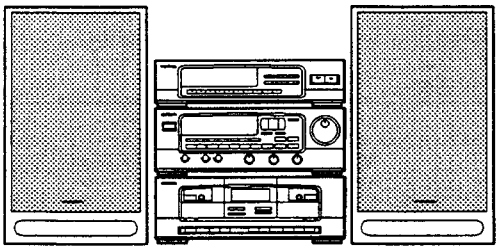
aiwa

Z-D3000M

SERVICE MANUAL



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM : 2ZM – 1P1N,R1N
- BASIC CD MECHANISM : KSM – 2101ABM
- TYPE. HE,LH,E,K,Z

※CENTER SYSTEM	AMPLIFIER	CASSETTE DECK	TUNER	SPEAKER	CD PLAYER (OPTIONAL)	TURNTABLE (OPTIONAL)
Z – D3000M HE,LH	MX – Z3000M	FX – WZ5000	TX – Z7000	※1 SX – Z3000	※2 DX – Z980M, DX – Z950M, DX – Z850, DX – Z830	※3 PX – E900, PX – E750
Z – D3000M E,K,Z	MX – Z3000M	FX – WZ5000	TX – Z7000	※1 SX – Z3000	※2 DX – Z850, DX – Z830, DX – Z7000M	※3 PX – E800, PX – E750

※1 CENTER SYSTEM dose not have ※1.

※2 As to the service information of CD PLAYER, see the individual service manual of original.

※3 As to the service information of TURNTABLE see the individual service manual of original.

www.manualscenter.com

M05

S/M Code No. 0281 DATE OF ISSUE 6/1993 – K

MODEL NO.

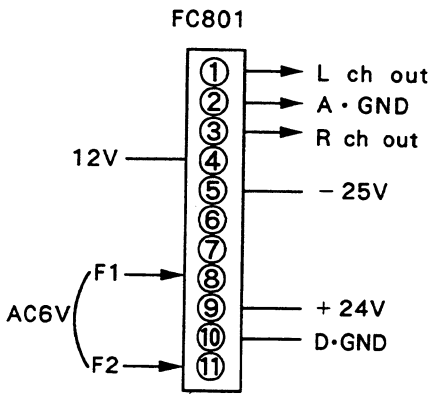
TX – Z7000

CAUTIONS WHEN SERVICING (TX – Z7000)

Model TX – Z7000 does no have a power supply circuit. Power is supplied to it through a 11 – pin flat cable and the signal inputs/outputs are also perfomed through this cable.
When servicing the TX – Z7000 connect it to the MX – Z3000M so that power is supplied to the TX – Z7000.
If the MX – Z3000M is not available, follow the procedure below.

[When servicing the unassembled TX – Z7000]

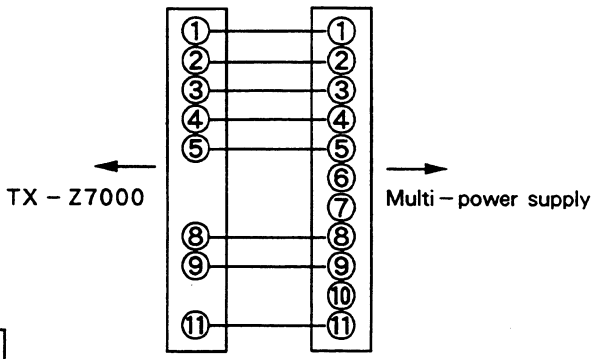
①Supply the following voltages to each terminal from an external power supply.

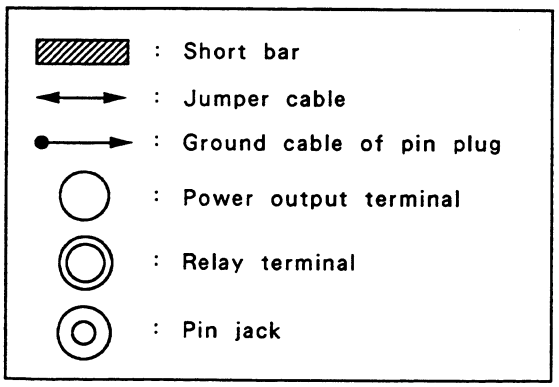


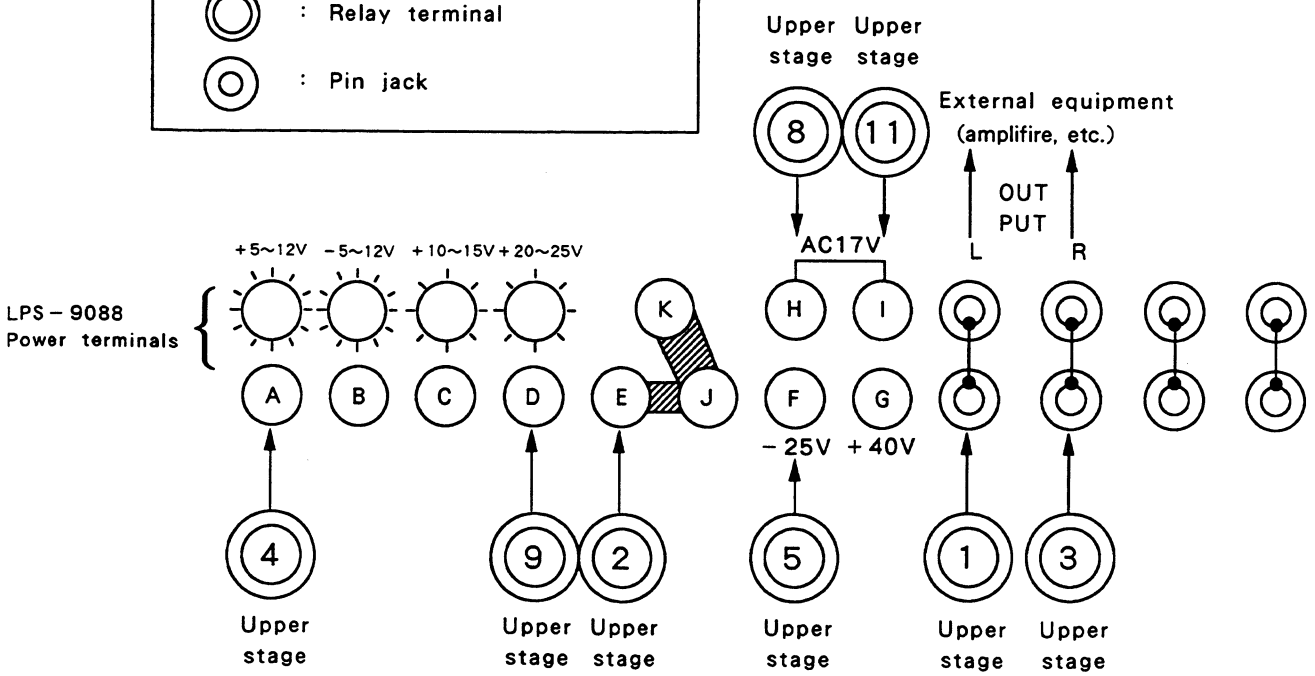
② Connection diagram when using multi power supply (LPS – 9088).

- Turn the TX – Z7000 on using the SLEEP function since the POWER SW is not supplied.
- Connect the multi – conversion harness for the X5 type (modeified harness for F550) to J1.

Connection diagram of multi – conversion harness







ELECTRICAL MAIN PARTS LIST (TX－Z7000)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

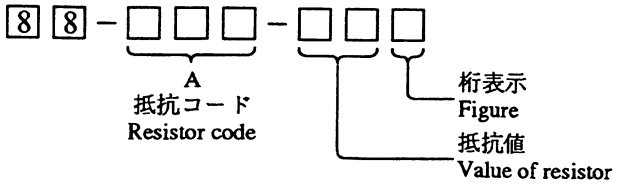
REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
IC			
	87-001-376-010		IC, LC7218
	87-001-942-010		IC, LA1265S(G)
	87-020-446-010		IC, TA7343AP
	81-VT1-610-010		IC, UPD75268CW-029
TRANSISTOR			
	89-502-094-080		C-FET, 2SK209Y
	89-502-115-080		C-FET, 2SK211GR〈YE, YZ〉
	89-503-025-080		C-FET, 2SK302GR
	89-327-143-080		C-TR, 2SC2714(O)
	89-316-235-080		C-TR, 2SC1623J5
	89-327-125-080		C-TR, 2SC2712GR
	89-333-266-080		C-TR, 2SC3326B
	87-026-230-080		C-TR, DTA114YK
	89-110-485-080		TR, 2SA1048GR
	89-318-155-080		TR, 2SC1815GR
	89-320-011-080		TR, 2SC2001K
	89-324-585-080		TR, 2SC2458GR
	87-026-214-080		TR, DTA114YS
DIODE			
	87-020-125-080		C-DIODE, 1SS181
	87-020-027-080		C-DIODE, 1SS184
	87-026-360-080		C-VARICAP, KV1430〈YLH, YH, YZ〉
	87-026-360-010		C-VARICAP, KV1430〈YE〉
	87-020-583-080		C-ZENER, 02CZ5.1Y
	87-020-585-080		C-ZENER, 02CZ6.2Y
	87-020-110-080		DIODE, 1SS177
	81-754-634-090		VARI-CAP, KV1260〈YE, YZ〉
	87-027-449-080		ZENER, HZ15-3L
	87-017-172-080		ZENER, HZS11A1L
MAIN C.B			
	81-MT3-655-010		AM PACK 1, S〈YLH, YH〉
	81-689-212-010		PLATE, EARTH
C1	87-010-312-080		C-CAP, S 15P-50 CH
C2	87-015-819-080		C-CAP, 0.01
C3	87-010-197-080		C-CAP, S 0.01-25 B
C4	87-010-197-080		C-CAP, S 0.01-25 B
C5	87-010-197-080		C-CAP, S 0.01-25 B
C6	87-010-197-080		C-CAP, S 0.01-25 B
C7	87-010-147-080		C-CAP, S 3P-50 CH〈YZ〉
C7	87-010-150-080		C-CAP, S 6P-50 CH〈YLH, YH, YE〉
C8	87-018-102-080		CAP, TC-U 6.8P-50 SL〈YLH, YH, YE〉
C9	87-010-158-080		C-CAP, S 22P-50 SL
C10	87-010-154-080		C-CAP, S 10P-50 CH
C11	87-010-312-080		C-CAP, S 15P-50 CH
C12	87-010-312-080		C-CAP, S 15P-50 CH
C13	87-010-197-080		C-CAP, S 0.01-25 B
C14	87-010-146-080		C-CAP, S 2P-50 CH
C15	87-010-145-080		C-CAP, S 1P-50 CH〈YLH, YH, YE〉
C15	87-010-148-080		C-CAP, S 4P-50 CH〈YZ〉
C16	87-010-154-080		C-CAP, S 10P-50 CH〈YLH, YH, YE〉
C16	87-010-149-080		C-CAP, S 5P-50 CH〈YZ〉
C17	87-010-197-080		C-CAP, S 0.01-25 B
C18	87-010-170-080		C-CAP, S 220P-50 SL
C19	87-010-197-080		C-CAP, S 0.01-25 B
C20	87-010-197-080		C-CAP, S 0.01-25 B
C21	87-010-197-080		C-CAP, S 0.01-25 B
C22	87-010-400-080		CAP, E 0.47-50 SME
C23	87-010-197-080		C-CAP, S 0.01-25 B
C24	87-010-149-080		C-CAP, S 5P-50 CH
C25	87-010-197-080		C-CAP, S 0.01-25 B〈YLH, YH, YE〉
C26	87-010-312-080		C-CAP, S 15P-50 CH
C27	87-010-197-080		C-CAP, S 0.01-25 B
C30	87-010-401-080		CAP, E 1-50 SME
C31	87-010-197-080		C-CAP, S 0.01-25 B
C32	87-010-197-080		C-CAP, S 0.01-25 B
C33	87-010-405-080		CAP, E 10-50 SME
C34	87-010-166-080		C-CAP, S 100P-50 SL
C35	87-010-197-080		C-CAP, S 0.01-25 B
C36	87-010-401-080		CAP, E 1-50 SME
C37	87-010-404-080		CAP, E 4.7-50 SME
C38	87-010-405-080		CAP, E 10-50 SME
C39	87-010-544-080		CAP, E 0.1-50
C40	87-010-403-080		CAP, E 3.3-50 SME
C41	87-010-404-080		CAP, E 4.7-50 SME
C42	87-010-404-080		CAP, E 4.7-50 SME〈YZ〉
C43	87-010-197-080		C-CAP, S 0.01-25 B
C45	87-010-404-080		CAP, E 4.7-50 SME
C46	87-010-197-080		C-CAP, S 0.01-25 B
C47	87-010-197-080		C-CAP, S 0.01-25 B
C48	87-010-197-080		C-CAP, S 0.01-25 B
C49	87-010-197-080		C-CAP, S 0.01-25 B
C50	87-010-197-080		C-CAP, S 0.01-25 B
C51	87-010-197-080		C-CAP, S 0.01-25 B
C52	87-010-197-080		C-CAP, S 0.01-25 B〈YE, YZ〉
C53	87-010-196-080		C-CAP, S 0.1-25 F
C54	87-010-197-080		C-CAP, S 0.01-25 B〈YE, YZ〉
C55	87-014-049-080		CAP, PP 470P-100 J〈YE, YZ〉
C56	87-010-158-080		C-CAP, S 22P-50 SL〈YE, YZ〉
C56	87-010-152-080		C-CAP, S 8P-50 CH〈YLH, YH〉
C57	87-010-169-080		C-CAP, S 180P-50 SL〈YE, YZ〉
C58	87-014-050-080		CAP, PP 510P-100 J〈YE, YZ〉
C60	87-010-404-080		CAP, E 4.7-50 SME〈YZ〉
C61	87-010-401-080		CAP, E 1-50 SME
C62	87-010-403-080		CAP, E 3.3-50 SME
C63	87-014-057-080		CAP, PP 1000P-100 J
C64	87-010-405-080		CAP, E 10-50 SME
C67	87-010-220-080		C-CAP, S 0.018-25 B
C68	87-010-220-080		C-CAP, S 0.018-25 B
C69	87-010-404-080		CAP, E 4.7-50 SME
C70	87-010-404-080		CAP, E 4.7-50 SME
C73	87-010-404-080		CAP, E 4.7-50 SME
C74	87-010-404-080		CAP, E 4.7-50 SME
C75	87-010-248-080		CAP, E 220-10 SME
C76	87-010-312-080		C-CAP, S 15P-50 CH
C77	87-010-197-080		C-CAP, S 0.01-25 B
C78	87-010-197-080		C-CAP, S 0.01-25 B
C79	87-010-197-080		C-CAP, S 0.01-25 B
C80	87-010-384-080		CAP, E 100-25 SME
C81	87-010-186-080		C-CAP, S 4700P-50 B
C82	87-010-400-080		CAP, E 0.47-50 SME
C83	87-015-762-080		C-CAP, 68P SL
C84	87-010-164-080		C-CAP, S 68P-50 SL
C85	87-010-164-080		C-CAP, S 68P-50 SL
C86	87-018-134-080		CAP, TC-U 0.01-16 Y
C87	87-010-263-080		CAP, E 100-10〈YLH, YH, YE〉
C87	87-010-404-080		CAP, E 4.7-50 SME〈YZ〉
C88	87-010-381-080		CAP, E 330-16 SME
C100	87-010-197-080		C-CAP, S 0.01-25 B
C101	87-010-197-080		C-CAP, S 0.01-25 B
C102	87-010-311-080		C-CAP, S 12P-50 CH〈YE, YZ〉
C103	87-010-197-080		C-CAP, S 0.01-25 B〈YE〉
C103	87-010-311-080		C-CAP, S 12P-50 CH〈YZ〉
C104	87-010-197-080		C-CAP, S 0.01-25 B〈YZ〉
C106	87-010-145-080		C-CAP, S 1P-50 CH〈YZ〉
C110	87-010-263-080		CAP, E 100-10
C111	87-010-405-080		CAP, E 10-50 SME
C112	87-010-401-080		CAP, E 1-50 SME
C781	87-010-197-080		C-CAP, S 0.01-25 B
CF1	87-030-105-010		FLTR, BPMB6A〈YZ〉
CF2	82-799-621-010		FLTR, SFE10.7MS2-A〈YZ〉
CF2	87-008-261-010		FLTR, SFE10.7MA5-A〈YLH, YH, YE〉
CF3	87-008-261-010		FLTR, SFE10.7MA5-A〈YZ〉
CF4	87-008-261-010		FLTR, SFE10.7MA5-A

www.manualscenter.com

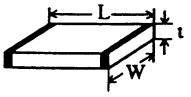
REF. NO	PART NO.	カンリ NO.	DESCRIPTION
CF5	82-794-670-010		BFU450C4N
J1	81-653-648-010		ANT TERM EARTH PAL〈YE, YZ〉
J1	81-653-638-110		ANT TERMINAL EARTH〈YLH, YH〉
J1	81-631-646-010		ANT TERM 2P PAL〈YE, YZ〉
J1	87-033-214-010		ANT TERM 4P(JT)〈YLH, YH〉
J2	81-754-629-010		CONNECTOR XH M 2P (UL)〈YE〉
L1	87-006-209-010		COIL, ANT FM 3/4 T
L2	87-006-210-010		COIL, ANT FM 2 3/4T
L3	87-006-200-010		COIL, RF FM 3-1/2T, L5
L4	87-006-201-010		COIL, RF FM3-1/2TS, L5
L5	87-006-201-010		COIL, RF FM3-1/2TS, L5〈YZ〉
L6	87-006-205-010		COIL, OSC FM(7K)
L7	87-003-231-080		C-COIL, S1UH
L8	87-008-427-010		COIL, FMIFT(4T)
L9	81-631-611-010		COIL, QUAD(SINGLE)
L11	87-008-452-010		FILTER, CFAZ-450
L12	87-006-207-010		COIL, ANT MW (3B)〈YE, YZ〉
L13	87-006-208-010		COIL, ANT LW〈YE, YZ〉
L14	82-794-687-010		COIL, OSC〈YE, YZ〉
L15	87-008-461-010		COIL, 2POLE MPX
L16	87-008-461-010		COIL, 2POLE MPX
L17	82-794-688-010		COIL, OSC LW〈YE, YZ〉
L18	87-008-421-010		COIL, FILTER AMTI-BIRDIE〈YZ〉
L19	87-003-098-080		COIL, 2.2UH
SFR1	87-024-174-080		SFR, 33K DIA6 V
SFR2	87-024-171-080		SFR, 4.7K DIA6 V
TC1	87-011-219-080		CAP, TRIMMER 10P VCT
TC2	87-011-219-080		CAP, TRIMMER 10P VCT
TC3	87-011-219-080		CAP, TRIMMER 10P VCT〈YZ〉
TC4	87-011-220-080		CAP, TRIMMER 20P VCT〈YE, YZ〉
TC5	87-011-221-080		TRIMMER. 30P VCT51
TC6	87-011-221-080		TRIMMER. 30P VCT51〈YE, YZ〉
WH802	82-VT1-605-010		CORD, FG 11P
X1	87-030-163-010		VIB, XTAL 7.2MHZ(NDK)
FRONT C.B			
C901	87-018-131-080		CAP, TC-U 1000P-50 B
C902	87-010-553-080		CAP, E 47-16
C903	87-010-498-080		CAP, E 10-16 5L
C904	87-010-494-080		CAP, E GAS 1/50
C905	87-018-131-080		CAP, TC-U 1000P-50 B
C906	87-010-497-080		CAP, E 4.7-35 5L
C907	87-010-494-080		CAP, E GAS 1/50
C908	87-010-494-080		CAP, E GAS 1/50
C909	87-018-134-080		CAP, TC-U 0.01-16 Y
C910	87-010-252-080		CAP, E(TAPG) 1000-6.3V
C911	87-018-209-080		CAP, TC-U 0.1-50 F
C912	87-018-209-080		CAP, TC-U 0.1-50 F
C913	87-018-209-080		CAP, TC-U 0.1-50 F
C915	87-010-381-080		CAP, E 330-16 SME
C916	87-010-381-080		CAP, E 330-16 SME
CF901	87-008-394-080		CF CST 4.19 MGW
FL901	80-VT1-608-010		FL, 9BT-83GK
L901	87-003-102-080		COIL, 10UH
L902	87-003-102-080		COIL, 10UH
L903	87-003-102-080		COIL, 10UH
L904	87-003-102-080		COIL, 10UH
RU901	87-002-669-010		IC, GP1U571X
SW901	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW901	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW902	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW902	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW903	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW903	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW904	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW904	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW905	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW905	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW906	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW906	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW907	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW907	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW908	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW908	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW909	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW909	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW910	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW910	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW911	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW911	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW912	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW912	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW913	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW913	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW914	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW914	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW915	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW915	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW916	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW916	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW917	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW917	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉
SW918	87-036-215-080		SW, TACT EVQ21404M〈YLH, YH〉
SW918	87-036-259-080		SW, TACT SKHVBB〈YE, YZ〉

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

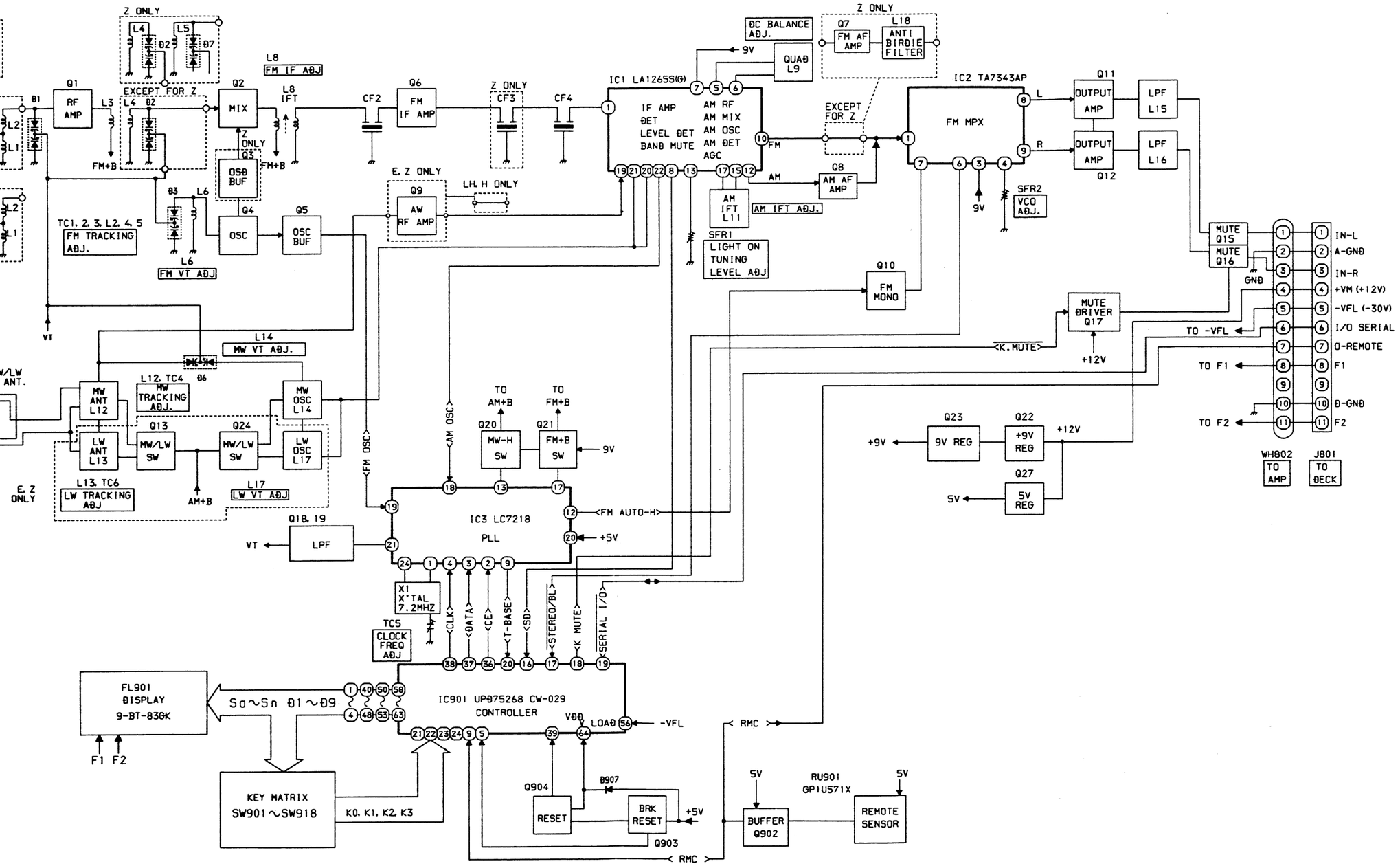
チップ抵抗部品コードの成り立ち
Chip resistor part coding



チップ抵抗
Chip resistor

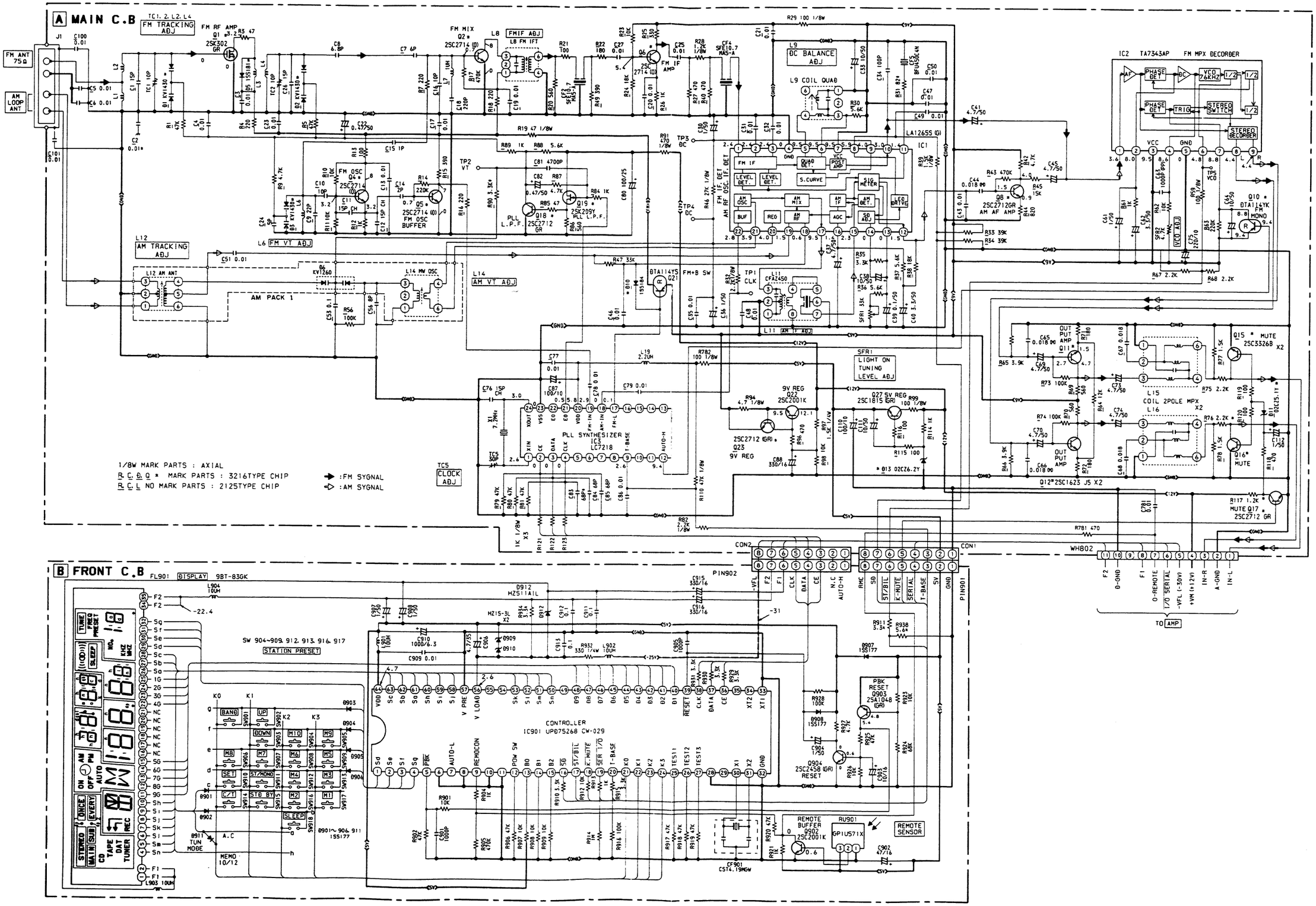
Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm) Form/外形	L	W	t	Resistor code : A 抵抗コード : A
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.5 ~0.7	128

BLOCK DIAGRAM (TX-Z7000)



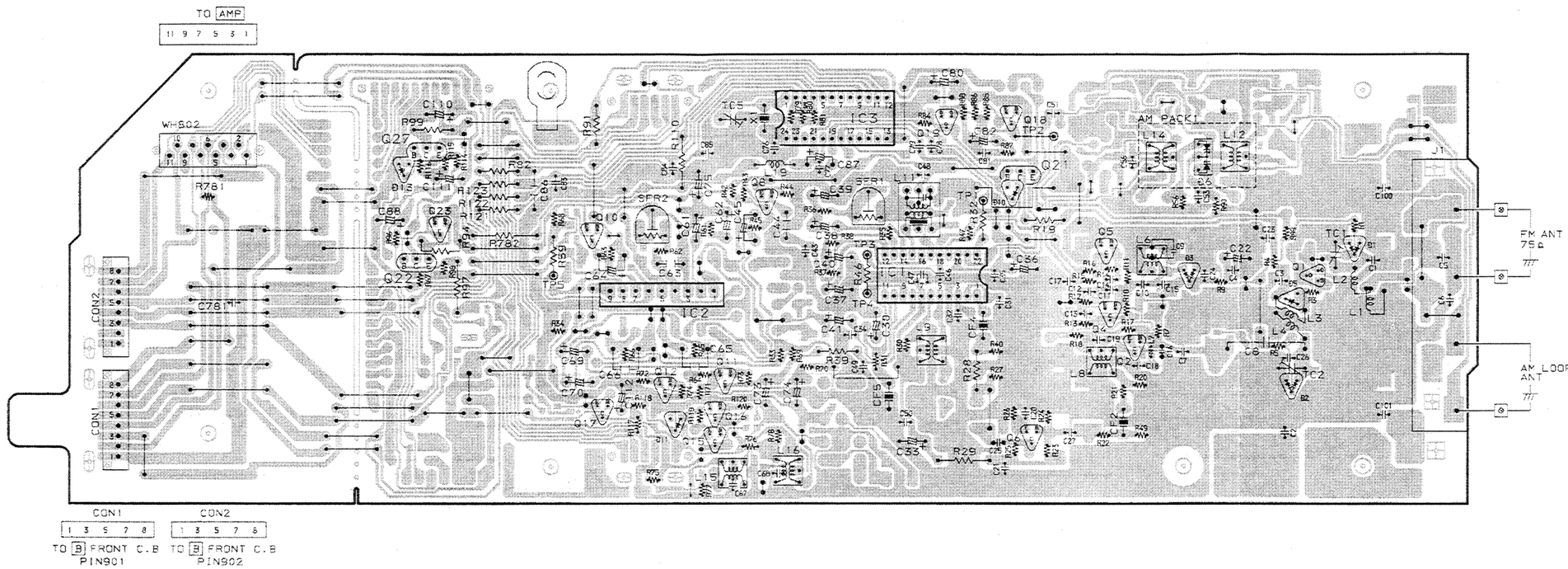
www.manualscenter.com

SCHEMATIC DIAGRAM — 1 (TX-Z7000H)

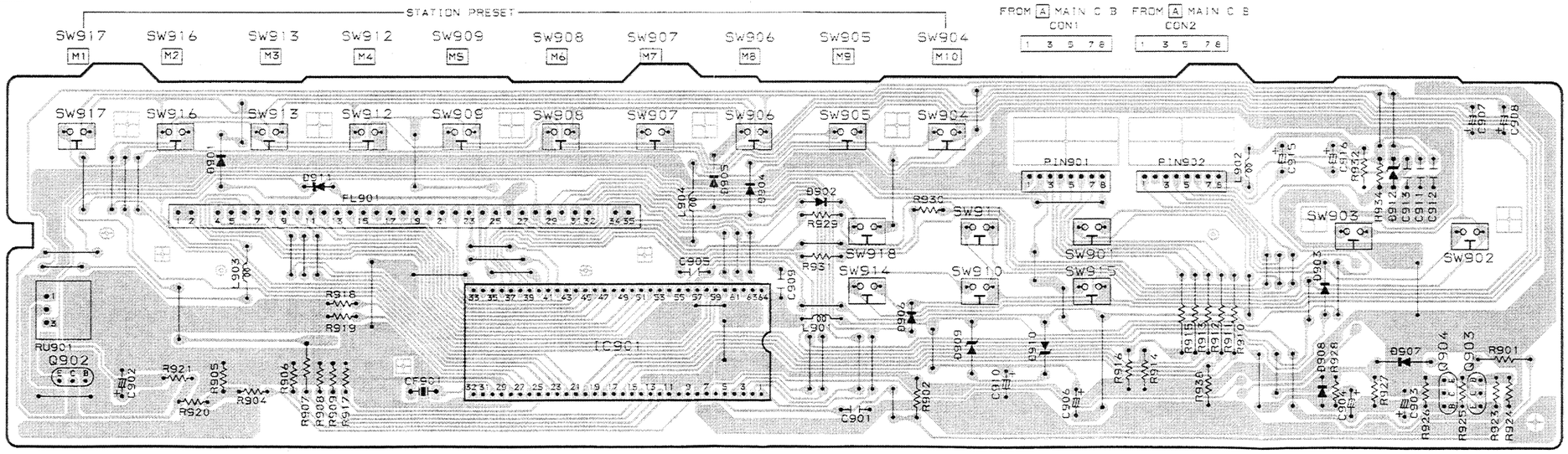


www.manualscenter.com

A MAIN C.B



B FRONT C.B



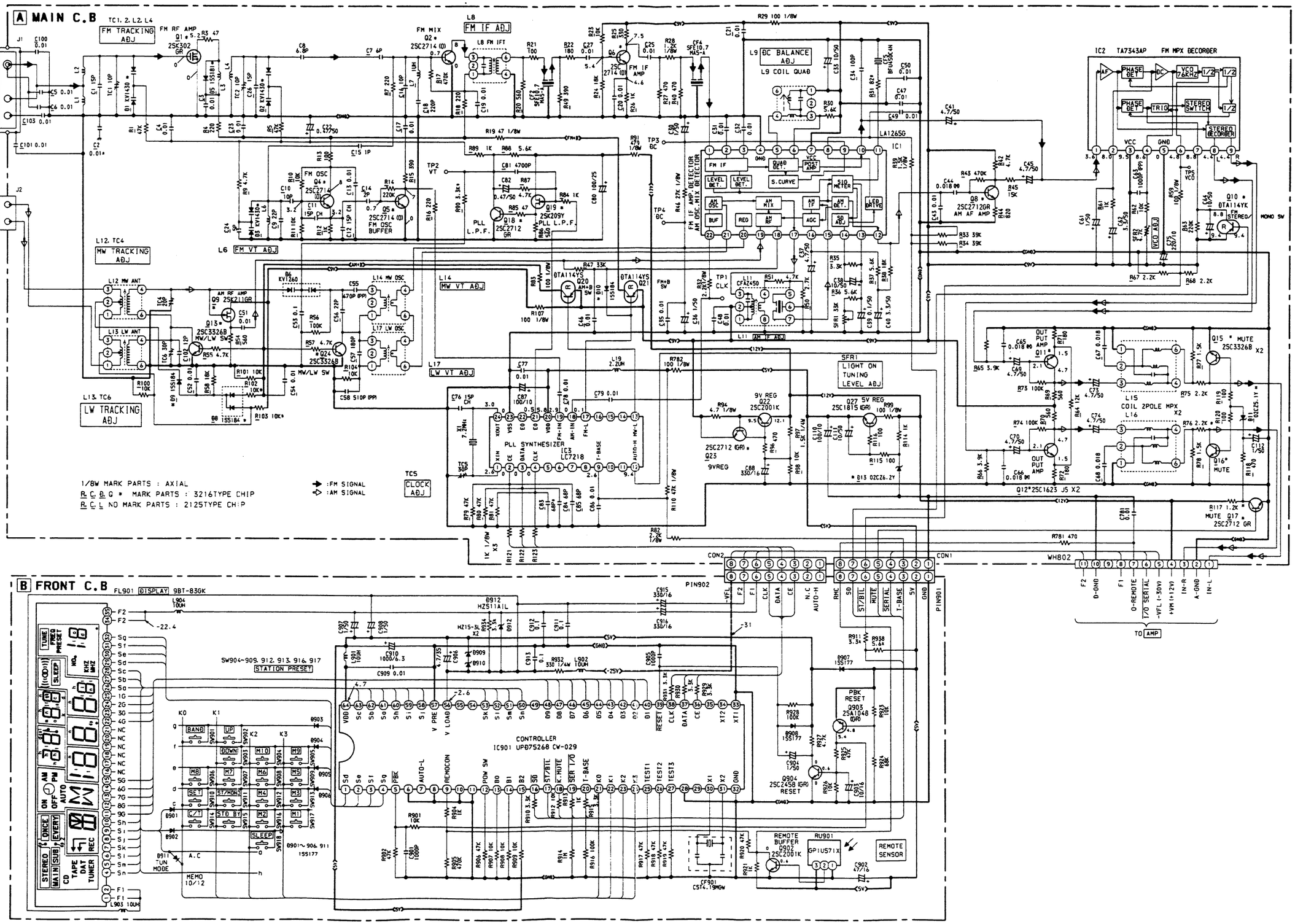
FL901 DISPLAY

GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

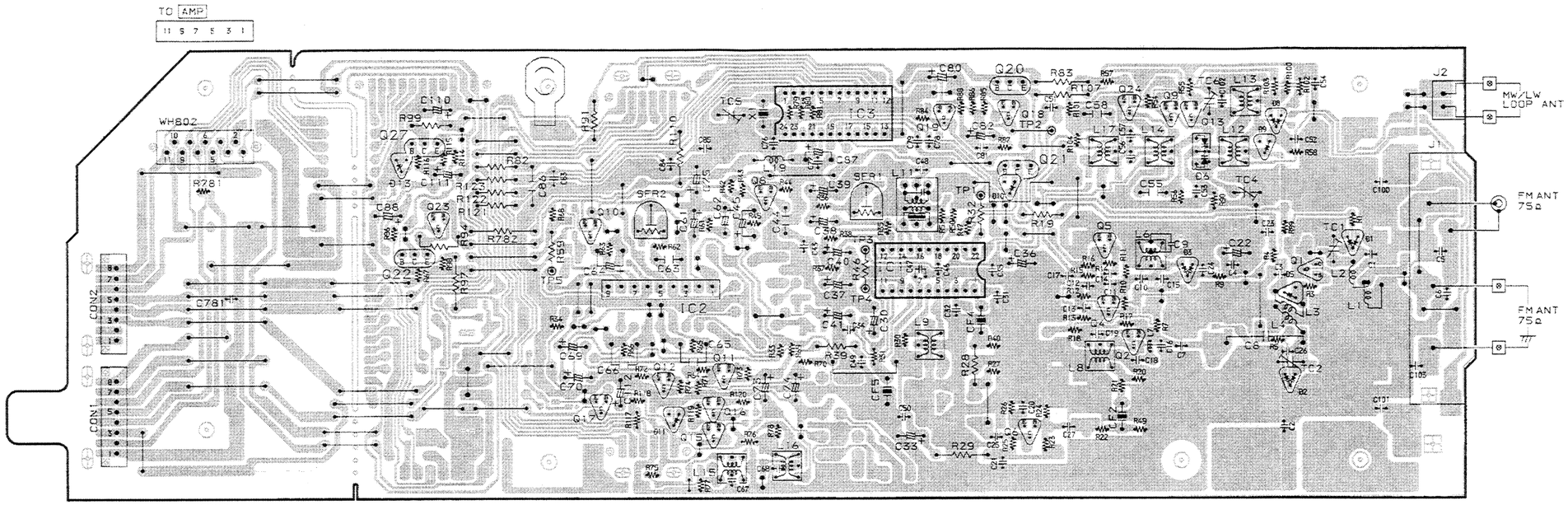
www.manualscenter.com

SCHEMATIC DIAGRAM — 2 (TX-Z7000E)

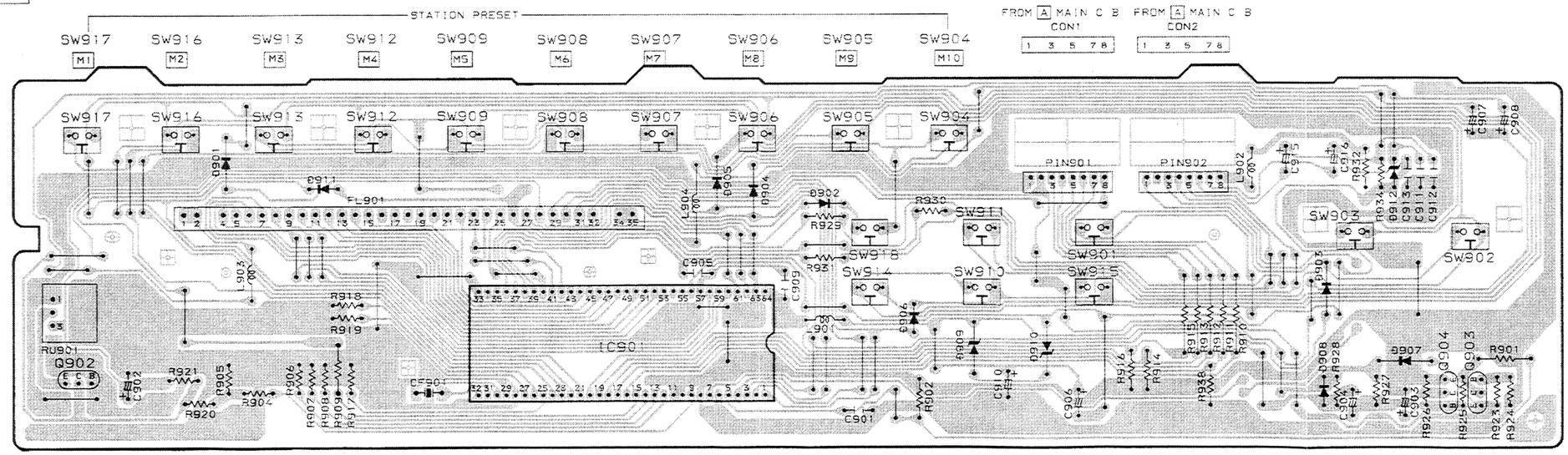


www.manualscenter.com

A MAIN C.B



B FRONT C.B

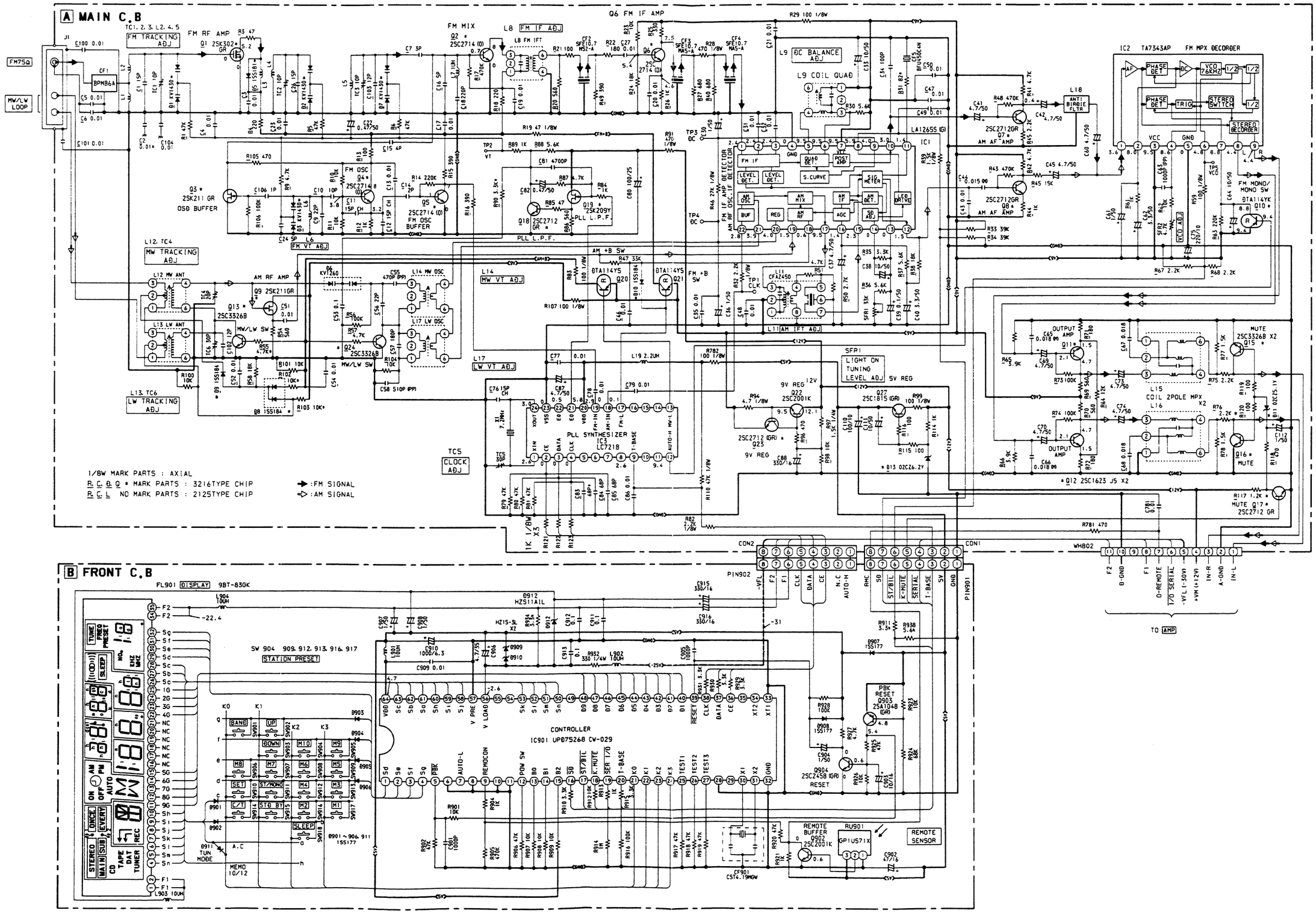


GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

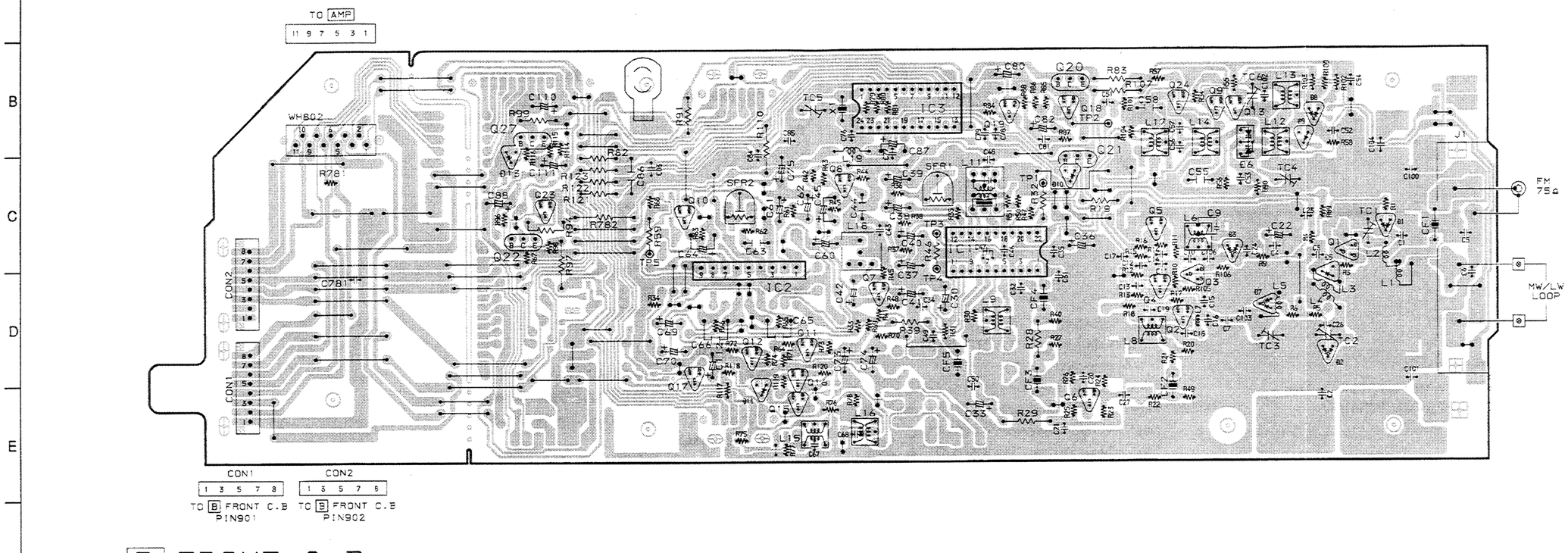
www.manualscenter.com

SCHEMATIC DIAGRAM — 3 (TX-Z7000Z)

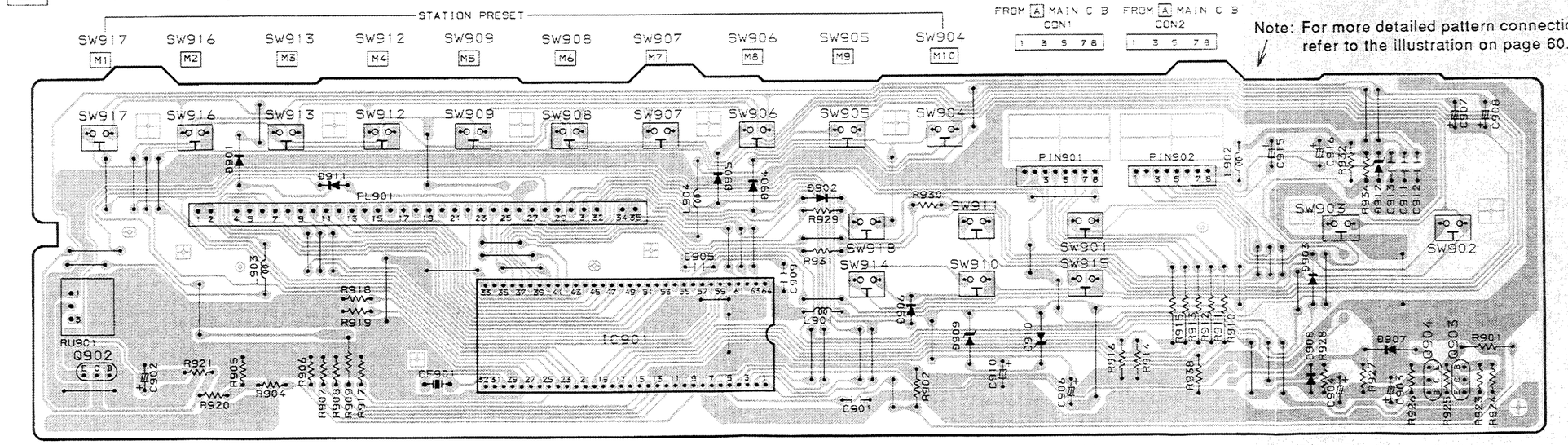


www.manualscenter.com

A MAIN C.B



B FRONT C.B

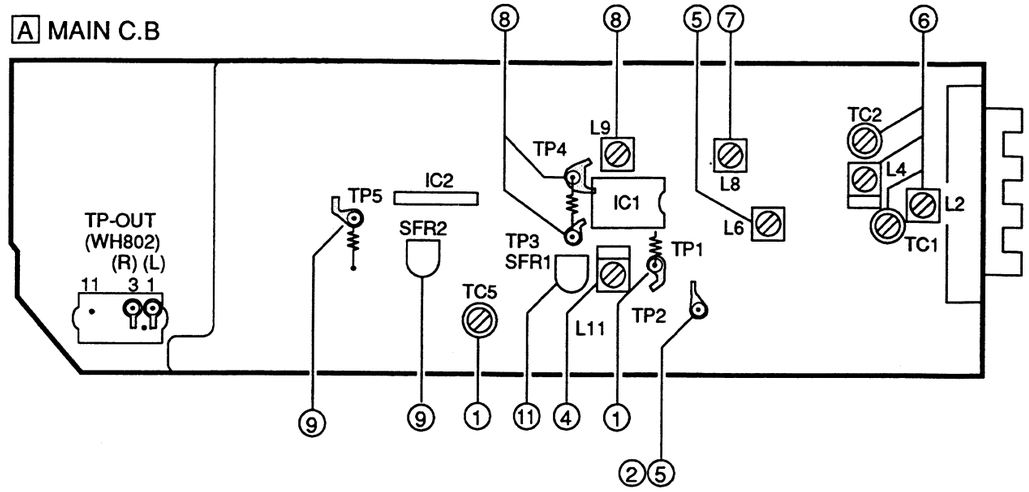


GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示は⊖表示です。)

www.manualscenter.com

ADJUSTMENT—1(TX—Z7000H)



1. Clock Frequency Adjustment
   Settings: · Test point: TP1
   · Adjustment location: TC5
   Method: Set to AM 1602kHz and adjust so that the test point becomes 2052kHz±0.01kHz.

2. AM VT Check
   Settings: · Test point: TP2 (VT)
   Method: Set to AM 531kHz and check so that the test point becomes 1.1V±0.20V.

3. AM Tracking Check
   Settings: · Test point: TP-OUT (WH802)
   Method: Set to AM 999kHz and check so that the sensitivity becomes less than 56dB.

4. AM IF Adjustment
   Settings: · Test point: TP-OUT (WH802)
   L11 ····· 450kHz

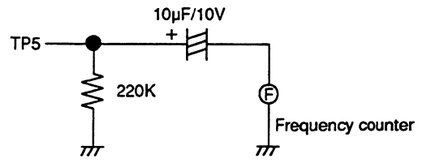
5. FM VT Adjustment
   Settings: · Test point: TP2 (VT)
   · Adjustment location: L6
   Method: Set to FM 108.0MHz and adjust L6 so that the test point becomes 9.0V±0.05V.

6. FM Tracking Adjustment
   Settings: · Test point: TP-OUT (WH802)
   TC1, 2 ····· 108.0MHz
   L2, 4 ····· 87.5MHz

7. FM IF Adjustment
   Settings: · Test point: TP-OUT (WH802)
   L8 ····· 10.7MHz

8. DC Balance Adjustment
   Settings: · Test point: TP3, 4 TP-OUT (WH802) (Distortion)
   · Adjustment location: L9
   Method: Set to FM 98.0MHz and adjust L9 so that TP3 and TP4 output becomes 0V±0.02V.
   Next, check so that the distortion becomes less than 0.6%.

9. MPX VCO Adjustment
   Settings: · Test point: TP5
   · MODE SW: STEREO
   · Adjustment location: SFR2
   Method: Connect a capacitor and resitor as below. Set to FM 98.0MHz non modulation and adjust so that the frequency at test point becomes 38kHz±0.05kHz.



10. Separation Check
    Settings: · Test point: TP-OUT (WH802)
    Method: Set to FM 98.0MHz and check the separation at TP-OUT becomes more than 27dB.

11. Light on tunning LED Adjustment
    Settings: · Adjustment location: SFR1
    · Input level: 18dB
    Method: Set to FM 98.0MHz and adjust TUNNING LED to light on by SFR1. After that, LED goes out by 2dB down.

PRACTICAL SERVICE FIGURE —1
(TX—Z7000 H)

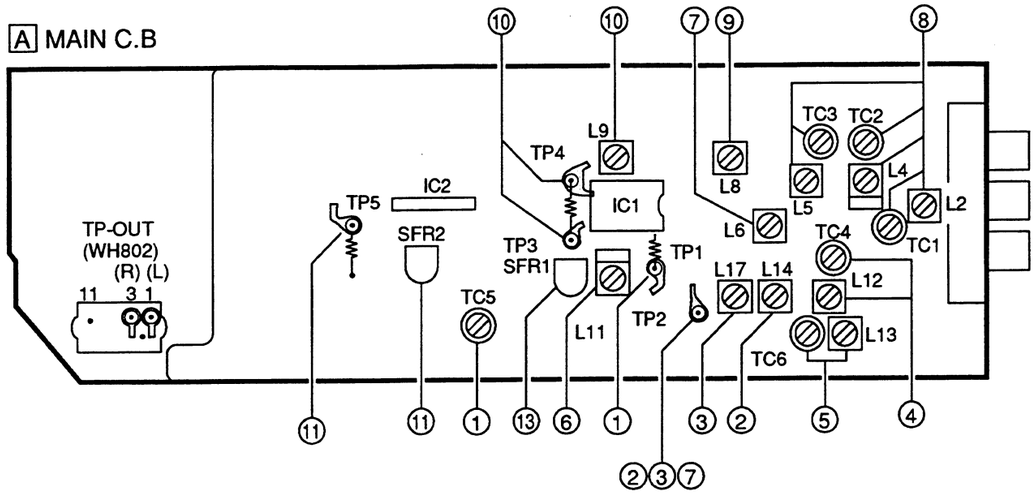
<FM SECTION>

IHF Sensitivity:	4±4dB (at 87.5MHz)
(THD 3%)	2±3dB (at 98.0/108.0MHz)
S/N 50dB Quieting Sensitivity:	Less than 34dB (at 87.5/98.0/108.0MHz)
Signal to Noise Ratio:	(MONO) More than 72dB (at 98.0MHz) (STEREO) More than 65dB (at 98.0MHz)
Distortion:	(MONO) Less than 0.6% (at 98.0MHz) (STEREO) Less than 1.5% (at 98.0MHz)
Stereo Separation:	More than 27dB
Intermediate Frequency:	10.7MHz

<AM SECTION>

Sensitivity:	56±4dB (at 603kHz)
(S/N 20dB)	52±4dB (at 999/1404kHz)
Distortion:	Less than 1.5% (at 999kHz)
Intermediate Frequency:	450kHz

ADJUSTMENT—2 (TX—Z7000E, Z)



1. Clock Frequency Adjustment
   Settings: · Test point: TP1
   · Adjustment location: TC5
   Method: Set to MW 1611kHz and adjust so that the test point becomes 2061kHz±0.01kHz.

2. MW VT Adjustment
   Settings: · Test point: TP2 (VT)
   · Adjustment location: L14
   Method: Set to MW 522kHz and adjust L14 so that the test point becomes 1.0V±0.05V.

3. LW VT Adjustment
   Settings: · Test point: TP2 (VT)
   · Adjustment location: L17
   Method: Set to LW 144kHz and adjust L17 so that the test point becomes 1.3V±0.05V.

4. MW Tracking Adjustment
   Settings: · Test point: TP-OUT (WH802)
   L12 ····· 603kHz
   TC4 ····· 1,404kHz

5. LW Tracking Adjustment
   Settings: · Test point: TP-OUT (WH802)
   L13 ····· 144kHz
   TC6 ····· 290kHz

6. AM IF Adjustment
   Settings: · Test point: TP-OUT (WH802)
   L11 ····· 450kHz

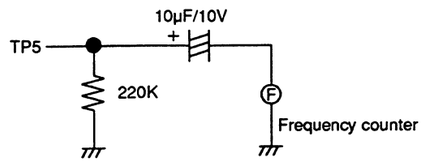
7. FM VT Adjustment
   Settings: · Test point: TP2 (VT)
   · Adjustment location: L6
   Method: Set to FM 108.0MHz and adjust L6 so that the test point becomes 9.0V±0.05V.

8. FM Tracking Adjustment
   Settings: · Test point: TP-OUT (WH802)
   L2, 4 ····· 87.5MHz (E)
   L2, 4, 5 ····· 87.5MHz (Z)
   TC1, 2 ····· 108.0MHz (E)
   TC1, 2, 3 ····· 108.0MHz (Z)

9. FM IF Adjustment
   Settings: · Test point: TP-OUT (WH802)
   L8 ····· 10.7MHz

10. DC Balance Adjustment
    Settings: · Test point: TP3, 4 TP-OUT (WH802) (Distortion)
    · Adjustment location: L9
    Method: Set to FM 98.0MHz and adjust L9 so that TP3 and TP4 output becomes 0V±0.02V. Next, check so that the distortion becomes less than 0.6%.

11. MPX VCO Adjustment
    Settings: · Test point: TP5
    · MODE SW: STEREO
    · Adjustment location: SFR2
    Method: Connect a capacitor and resitor as below. Set to FM 98.0MHz non modulation and adjust so that the frequency at test point becomes 38kHz±0.05kHz.



12. Separation Check
    Settings: · Test point: TP-OUT (WH802)
    Method: Set to FM 98.0MHz and check the separation at TP-OUT becomes more than 27dB.

13. Light on tunning LED Adjustment
    Settings: · Adjustment location: SFR1
    · Input level: 18dB
    Method: Set to FM 98.0MHz and adjust TUNNING LED to light on by SFR1. After that, LED goes out by 2dB down.

www.manualscenter.com

PRACTICAL SERVICE FIGURE—2 (TX—Z7000E, Z)

<FM SECTION>

Usable Sensitivity: (THD 3%)	4±4dB (at 87.5MHz) (E) 8±4dB (at 87.5MHz) (Z) 2±4dB (at 98.0/108.0MHz) (E) 6±4dB (at 98.0/108.0MHz) (Z)
S/N 50dB Quieting Sensitivity:	Less than 34dB (at 87.5/98.0/108.0MHz) (E) Less than 38dB (at 87.5/98.0/108.0MHz) (Z)
Signal to Noise Ratio: (MONO)	More than 72dB (at 98.0MHz) (E) More than 68dB (at 98.0MHz) (Z)
(STEREO)	More than 65dB (at 98.0MHz) (E) More than 60dB (at 98.0MHz) (Z)
Total Harmonic Distortion: (MONO)	Less than 0.6% (at 98.0MHz)
(STEREO)	Less than 1.5% (at 98.0MHz)
Stereo Separation:	More than 27dB
Intermediate Frequency:	10.7MHz

<MW SECTION>

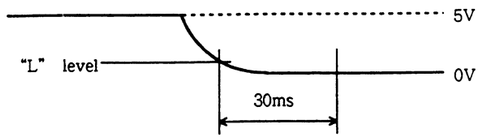
Sensitivity: (S/N 20dB)	56±4dB (at 603kHz) 52±4dB (at 999/1404kHz)
Total Harmonic Distortion:	Less than 1.5% (at 999kHz)
Intermediate Frequency:	450kHz

<LW SECTION>

Sensitivity: (S/N 20dB)	63±5dB (at 144kHz) 60±5dB (at 198/290kHz)
Total Harmonic Distortion:	Less than 1.2% (at 198 kHz)
Intermediate Frequency:	450kHz

IC DESCRIPTION (TX-Z7000)

IC, μ PD75268CW – 029

Pin No.	Pin Name	I/O	Description
1~4	Sd~Sg	O	FL display segment signal outputs, key scan signal outputs. Active "H"
5	$\overline{PBK}$	I	Power failure detection input. When "L" level continues for 30 ms or more, a power failure is detected (the unit enters the backup mode). 
6	———	–	Not used (connected to ground).
7	AUTO – L	O	When an FM broadcast is received, this pin outputs a signal depending on the AUTO condition selected by the MODE key. Active "L" when the AUTO indicator lights. • Even if the AUTO indicator changes when the frequency is being set during timer programming, the output follows the condition currently received.
8	———	–	Not used (connected to ground).
9	REMOCON	I	Serial data input for remote control. Active "H" (the rise is detected).
10	———	–	Not used (connected to ground).
11	———	–	Not used (connected to ground).
12	POW SW	I/O	Power control input port. The power is turned on and off a alternately each time the power switch of the amplifier is pressed.
13	B0	I	These input pins select the frequency range, etc. with the 3 bits depending on the destination of the units.
14	B2		
15	B1		
16	$\overline{SD}$	I	Input to stop auto scanning. Active "L". • The input is not accepted during power off. • The input cause "TUNE" to light. • Searches for SD signals every 5 ms during auto scanning. When 4 "L" pulses are conuted, sacnning will stop. • SD is not detected during manual tuning.
17	$\overline{STEREO}$	I	Input which causes the $\overline{STEREO}$ indicator to light. Active "L". • This input is not accepted during power off.
18	$\overline{K \cdot MUTE}$	O	Outputs a muting signal when a key is operated.
19	$\overline{SER\ I/O}$	I/O	8 – bit serial data input/output.
20	T – BASE	I	Receives 8Hz pulses from the PLL (LC7218) as a clock signal timing.
21~24	KO~K3	I	Key matrix inputs (K2 and K3 are not used and connected to ground).
25	TEST1	I	Test mode setting inputs.
26	TEST2		
27	TEST3		
28	AC CLK	I	Receives the commercial power frequency (the AC level is 5V) as a reference signal for the clock. Not used (connected to ground).
29	———	–	Not used (not connected).
30	X1	–	A ceramic oscillator which generates the main system clock signal (4.19MHz) is connected.
31	X2		
32	GND	–	Ground pin.
33	XT1	–	Not used (connected to ground).
34	XT2		Not used (not connected).
35	POW ON	–	Not used (not connected). Goes "H"during power on and "L"during power off.
36	CE	O	Output ports which transmit serial data to the PLL (LC7218). Active "H".
37	DATA		
38	CLK		
39	$\overline{RESET}$	I	System reset input. When the TUNER MODE and BAND switches are pressed and held for 1 second, the clock and preset stations are reset.

Pin No.	Pin Name	I/O	Description
40~48	D1~D9	O	FL display digit outputs.
49	———	–	Not used (not connected).
50	Sn	O	FL display segment outputs.
51	Sm		
52	Sℓ		
53	Sk		
54	———	–	Not used (not connected).
55	———		
56	V LOAD	I	Supplies power (– 25V) to the output buffer of the FL display driver.
57	V PRE	I	Connected to ground.
58	Sj	O	FL display segment outputs.
59	Si		
60	Sh		
61	Sa		
62	Sb		
63	Sc		
64	VDD	–	+ 5V power terminal.

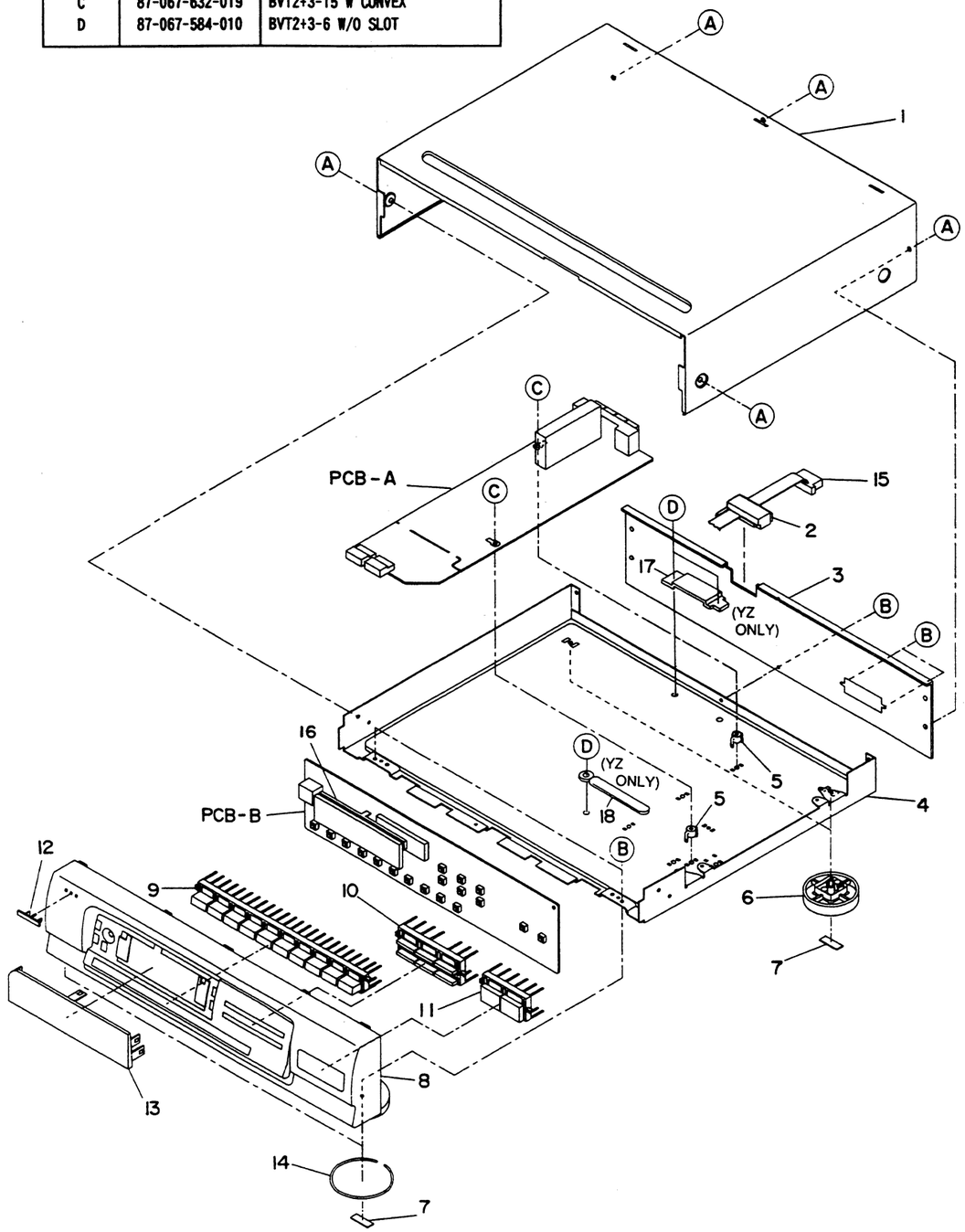
IC, LC7218

Pin No.	Pin Name	I/O	Description
1 24	X IN X OUT	–	Clock oscillator connection pins. A 7.2MHz crystal oscillator is connected.
2 3 4	CE DATA CLK	I	When a key is operated, signals are transferred from the CPU. Active "H".
5 ≀ 8	———	–	Unused (Not connected).
9	T – BASE	O	Outputs an 8Hz signal. Transfers it to the CPU as a time base clock signal.
10	———	–	Unused (Not connected).
11	———	O	Unused (Not connected).
12	AUTO – H	–	Outputs "H" when FM stereo switching is set to AUTO.
13	MW (AM) – L	O	Outputs "L" when an MW (AM) broadcast is received.
14 15 16	———	–	Unused (Not connected).
17	FM – L	O	Outputs "L" when an FM broadcast is received.
18	AM – IN	I	AM local oscillation input.
19	FM – IN	I	FM local oscillation input.
20	VDD	–	Power supply pin. 5V ± 10%
21	EO_1	O	PLL error output.
22	EO_2	–	Unused (Not connected).
23	VSS	–	Ground pin.

www.manualscenter.com

EXPLODED VIEW (TX-Z7000)

REF. NO.	PART NO.	DESCRIPTION
A	87-067-641-019	UTT2+3-8 W/O SLOT BLK
B	87-067-660-019	BVT2+3-8 W/O SLOT BLK
C	87-067-632-019	BVT2+3-15 W CONVEX
D	87-067-584-010	BVT2+3-6 W/O SLOT



MECHANICAL PARTS LIST (TX-Z7000)

DESCRIPTIONで判断できない物は"REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q,TY
	1	★82-VT1-009-119	CAB, STEEL	※	1
	2	★89-VT5-202-010	BUSHING, CORD		1
	3	★82-VT1-010-019	PANEL, REAR YHJBN (YH)	※	1
	3	★82-VT1-016-019	PANEL, REAR YLHJBN (YLH)	※	1
	3	★82-VT1-012-019	PANEL, REAR YEBNE (YE)	※	1
	3	★82-VT1-013-019	PANEL, REAR YZBNE (YZ)	※	1
	4	---	CHASSIS, MAIN		1
	5	---	HOLDER, PCB		2
	6	★81-VX1-012-019	FOOT, REAR		2
	7	★82-VW2-211-019	FELT, 20－7.5－2		4
	8	★82-VT1-007-119	CAB, FR EX	※	1
	9	★82-VT1-002-119	KEY, 10	※	1
	10	★82-VT1-003-019	KEY, BAND	※	1
	11	★82-VT1-004-019	KEY, UP／DOWN	※	1
	12	★81-DS1-011-019	BADGE, AIWA N		1
	13	★82-VT1-005-019	WINDOW, TU	※	1
	14	★81-VW1-015-019	RING FOOT		2
	15	★82-VT1-605-010	CORD, FG 11P	※	1
	16	★81-690-201-110	GUIDE, FL		1
	17	★81-VX1-210-110	HLDR, WIRE G (YZ)		1
	18	★87-038-039-010	WIRE, BINDER (YZ)		1

www.manualscenter.com